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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,610	08/24/2001	Huiping Li	37112-173148	8980

7590 06/14/2004

Venable
P.O. Box 34385
Washington, DC 20043-9998

EXAMINER	
HAVAN, THU THAO	
ART UNIT	**PAPER NUMBER**
2672	7

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/935,610	Applicant(s) LI ET AL.	
	Examiner Thu-Thao Havan	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims **1-38** are rejected under 35 U.S.C. 102(e) as being unpatentable by Nishimura et al. (US patent no. 5,631,697).

Re claim **1**, Nishimura discloses a method of video processing, comprising extracting a pre-existing overlay present in a video sequence extracting comprising detecting at least one potential overlay in the video sequence (col. 5, line 55 to col. 6, line 55; fig. 3), and verifying that the at least one potential overlay is at least one actual overlay (col. 6, line 56 to col. 7, line 49). In other words, Nishimura teaches an extraction means for extracting an extracted candidate region through a decision that part of an input video signal meeting a predetermined condition is an image of a target object and a decision means for comparing the extracted candidate region extracted by the extraction means and the object region stored in the storage device to decide a new

object region and storing the new object region in the storage device. In that, the decision means detects, for example, the overlapping portions of the two regions, decides a new object region which is a size larger than the overlapping portions and provides the new object region. At the same time, the decision means stores the new object region in the storage device to update the contents of the storage device.

Re claims **2-3 and 16**, Nishimura teaches post processing at least one actual overlay to remove extraneous pixel and computing a variance for each pixel of the at least one actual overlay; and comparing the variance with a threshold to determine whether or not the pixel should be removed as an extraneous pixel (col. 13, lines 33-63).

Re claims **4, 25**, Nishimura teaches detecting comprises the steps of performing wavelet decomposition on the video sequence, extracting features based on the results of the wavelet decomposition, and performing neural network processing on the extracted features (col. 14, lines 1-65).

Re claims **5, 21**, Nishimura discloses utilizing three-layer back-propagation neural network processing (figs. 1 and 12a).

Re claims **6, 15, 30, 32-33**, Nishimura discloses performing temporal verification and performing spatial verification (col. 2, lines 23-59). In that Nishimura teaches verification in the means of a decision means for comparing the extracted candidate region extracted by the extraction means and the object region stored in the storage device to decide a new object region and storing the new object region in the storage device.

Re claims **7, 17-20, 22-24, 31, 34, and 36-38**, Nishimura teaches translating potential overlay over a search range, for each translated version of potential overlay, computing a mean square error in a next video frame of video sequence subsequent to a video frame in which potential overlay is originally detected, determining a minimum of the computed mean square errors for next video frame, and comparing the determined minimum mean square error to a threshold (figs. 13-16).

Re claims **8-14**, Nishimura discloses selecting a particular pixel of potential overlay and recording its coordinates and recording the translated coordinates of particular pixel corresponding to determined minimum mean square error (col. 13, line 20 to col.14, line 19).

Re claims **26-29, 31, and 35**, the limitations of claims 26-29, 31, and 35 are identical to claims 1-6 above. Therefore, claims 26-29, 31, and 35 are treated the same as discussed with respect to claims 1-6 above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yu et al., US patent no. 6,456,726

Kumar et al., US patent no. 6,522,787

Brunner et al., US Patent No. 6,369,830

Akutsu et al., US patent no. 6,411,339

Lee et al., US patent no. 6,665,346

Tamayama et al., US Patent No. 6,545,708

Chiba et al., US patent no. 6,473,536

Katto, US patent no. 5,602,593

Matsuura et al., US Patent No. 6,332,003

Naoi et al., US patent no. 6,430,303

Nagata et al., US patent no. 6,701,017

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan
Art Unit: 2672
June 3, 2004

JEFFERY BRIER
PRIMARY EXAMINER